

Human Angiotensin II ELISA Kit ab285306

1 Image

Overview

Product name Human Angiotensin II ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

| Sample | n | Mean | SD | CV% |
|---------|---|------|----|------|
| Overall | | | | < 8% |

Inter-assay

| Sample | n | Mean | SD | CV% |
|---------|---|------|----|-------|
| Overall | | | | < 10% |

Sample type Serum, Plasma, Other biological fluids, Tissue Homogenate

Assay type Competitive

Sensitivity < 18.75 pg/ml

Range 31.25 pg/ml - 2000 pg/ml

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Product overview Human Angiotensin II ELISA Kit (ab285306, E4527) is a competitive ELISA assay for the quantitative measurement of Ang II in Human serum, plasma, tissue homogenates and other biological fluids. The microtiter plate provided in this kit has been pre-coated with the target antigen. During the reaction, the target in the sample or standard competes with a fixed amount of target on the solid phase supporter for sites on the Biotinylated Detection Antibody specific to target. The unbound sample or excess conjugate are washed from the plate. HRP-Streptavidin (SABC) is added and incubated. Then TMB substrate solution is added to each well. The HRP enzymatic reaction is detected using TMB-substrate. Finally, an acidic stop solution terminates the enzymatic reaction. The color developed is measure at 450 nm. The concentration of target in the samples is then determined by comparing the OD of the samples to the standard curve.

Platform Microplate (12 x 8 well strips)

Properties

Storage instructions

Store at +4°C. Please refer to protocols.

| Components | 96 tests |
|--|-----------|
| 25X Wash buffer | 1 x 30ml |
| Antibody dilution buffer | 1 x 10ml |
| Biotin/Detection antibody (Concentrated) | 1 x 60µl |
| HRP-Streptavidin Conjugate (SABC) | 1 x 120µl |
| Lyophilized Standard 2000 pg | 2 vials |
| Micro ELISA Plate | 1 unit |
| Plate sealers | 5 units |
| SABC dilution buffer | 1 x 10ml |
| Sample / Standard Dilution Buffer | 1 x 20ml |
| Stop Solution | 1 x 10ml |
| TMB Substrate | 1 x 10ml |

Function

Essential component of the renin-angiotensin system (RAS), a potent regulator of blood pressure, body fluid and electrolyte homeostasis.

Angiotensin-2: acts directly on vascular smooth muscle as a potent vasoconstrictor, affects cardiac contractility and heart rate through its action on the sympathetic nervous system, and alters renal sodium and water absorption through its ability to stimulate the zona glomerulosa cells of the adrenal cortex to synthesize and secrete aldosterone.

Angiotensin-3: stimulates aldosterone release.

Angiotensin 1-7: is a ligand for the G-protein coupled receptor MAS1 (By similarity). Has vasodilator and antidiuretic effects (By similarity). Has an antithrombotic effect that involves MAS1-mediated release of nitric oxide from platelets.

Tissue specificity

Expressed by the liver and secreted in plasma.

Involvement in disease

Essential hypertension
Renal tubular dysgenesis

Sequence similarities

Belongs to the serpin family.

Post-translational modifications

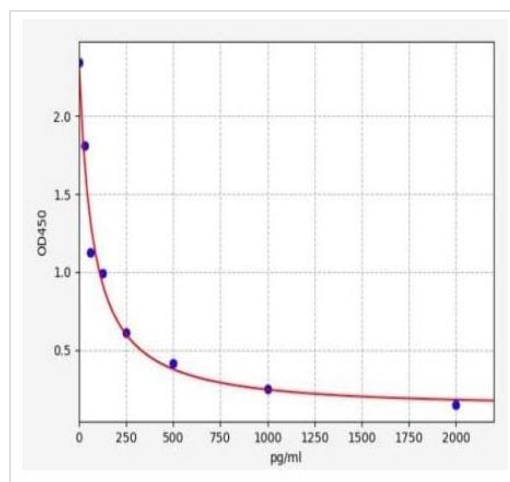
Beta-decarboxylation of Asp-34 in angiotensin-2, by mononuclear leukocytes produces alanine.

The resulting peptide form, angiotensin-A, has the same affinity for the AT1 receptor as angiotensin-2, but a higher affinity for the AT2 receptor.

In response to low blood pressure, the enzyme renin/REN cleaves angiotensinogen to produce angiotensin-1. Angiotensin-1 is a substrate of ACE (angiotensin converting enzyme) that removes a dipeptide to yield the physiologically active peptide angiotensin-2. Angiotensin-1 and angiotensin-2 can be further processed to generate angiotensin-3, angiotensin-4. Angiotensin 1-9 is cleaved from angiotensin-1 by ACE2 and can be further processed by ACE to produce angiotensin 1-7, angiotensin 1-5 and angiotensin 1-4. Angiotensin 1-7 has also been proposed to be cleaved from angiotensin-2 by ACE2 or from angiotensin-1 by MME (nepriylsin).

The disulfide bond is labile. Angiotensinogen is present in the circulation in a near 40:60 ratio with the oxidized disulfide-bonded form, which preferentially interacts with receptor-bound renin.

Images



Angiotensin II (Ang II) (Human) ELISA Kit Standard Curve

Typical Standard Curve: These standard curves are for demonstration only. A standard curve must be run with each assay.

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